

## BELIEF OF THE TEACHERS OF MATHEMATICS OF MALDA DISTRICT ABOUT THE NATURE OF TEACHING AND LEARNING METHODS

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### **ABSTRACT:**

*The teachers are one of the main components of education system of any country. They play a vital role in shaping the education system of a country. The government frames policy for the development of the education system but the policies are implemented by the active participation of the teachers. If the teachers are not active in implementing the government policies, all the plans and programmes and at the same time money expended will become insignificant. Teaching learning is one of the main work that the teachers have to do in the school. If the teaching learning in the school is not successful then the entire process of the education becomes meaningless. So to make the teaching learning process a success several methods of teaching have been suggested by the educationists, cognitive scientists and instructional scientists. But the question is what are the beliefs of the teachers about those teaching methods? Because, If the teachers do not have positive belief about those methods of teaching then they will not use those methods in teaching learning. So in the present study, the investigator tried to find the answers of this question. For this purpose the researcher takes a sample of 237 teachers among which 102 are female and 135 are male. To collect the data about the belief of the teachers a questionnaire was formed by the investigator himself. The questionnaire contains both open ended and close ended questions. The data thus collected by the investigator was analyzed and the various types of results are found.*

**Keywords:** Teaching learning method, teaching belief, 21<sup>st</sup> century class-room.

### **INTRODUCTION:**

The students of the present day requires 21<sup>st</sup> century skill to survive in this challenging world. To provide this skill to the students and to prepare them suitable for this world the teaching methods also required to be changed. The adherence to the traditional methods used in the twentieth century will no longer remain useful. In the

twentieth century teaching methods the knowledge of the content of the teachers were provided more importance, because the teachers of those times believe direct transmission method of teaching. But the modern days educationists think that the content knowledge and pedagogical knowledge of the teachers are not sufficient to prepare the students suitable for the present complex world. The teacher should think differently. The new types of teaching methods are to be developed. The educationists, the cognitive scientists, the instructional scientists have proposed various types of teaching methods for this purpose. But the teachers faced a challenge to shift themselves from the 20<sup>th</sup> century class-room to 21<sup>st</sup> century class-room. They were psychologically not ready to accept those new methods. They always try to criticize these new methods and try to always look at the negative sides of the modern methods and always argue to establish that the traditional methods are better. According to Pajares (1992) teacher's beliefs about the teaching learning methods plays a vital role in determining the effectiveness of the teaching learning process and in determining the teaching practice. There is a strong relationship between the pedagogical belief of the teachers, teaching decisions, class-room practices and their planning for teaching. If the teachers have negative belief and attitudes towards these new methods of teaching then it will highly affect the selection of teaching learning method. There are teachers who believe direct transmission method of learning. Those teachers always try to ensure calm, quite and concentrated silent class-room. They are always active to communicate knowledge in a clear and structured manner and give students a clear and resolvable solution. They do not believe that an incorrect solution done by the student may be a path of the correct solution in the future. The teacher's beliefs work as filter and this filter makes the teacher take decision about which method he will follow to teach the students and which will not. Knowledge of content and pedagogical knowledge are not sufficient for a teacher to enter a classroom but the proper belief which guides the teacher for effective teaching learning is inevitable for them. To prepare the present day teachers for the 21<sup>st</sup> century students the negative beliefs of the teachers about the new teaching methods are to be identified and the teacher educators should take the responsibility to remove those negative beliefs and negative attitudes towards the new teaching methods. The present study aims at identifying those negative attitudes and beliefs of the teachers about the new teaching methods.

### **OBJECTIVES:**

The main objectives of the present study are as the followings:

1. To investigate the beliefs of the teachers about traditional method of teaching, constructivist method, ICON model of teaching.

2. To investigate whether the male and female teachers have the similar belief about the traditional method of teaching, constructivist method, ICON model of teaching have different beliefs.
3. To investigate whether the trained teacher's beliefs about teaching method is different from the untrained teachers.
4. To investigate whether the teachers of the highly reputed schools have different beliefs from the other teachers

### **METHODOLOGY:**

The methodology used in this study is descriptive survey study. For this study a questionnaire was prepared by the researcher himself to identify the beliefs of the teachers of mathematics about the traditional method of teaching, constructivist's method and ICON model of teaching mathematics. The questionnaire contains both open ended and close ended questions. The data collected by this questionnaire is used for analysis and discussion.

### **POPULATION:**

All the teachers of Malda district comprises the population of the study

### **SAMPLE:**

For this study a sample of 237 teachers of Malda district was taken by purposive sampling among which 102 were female and 135 were male. Among the female teachers 72 were trained teachers and 30 were untrained and among the male teachers 99 were trained and 36 were untrained teachers. Also the entire sample contains 71 teachers (40 male and 31 female) from two reputed schools (in respect of board examination result of the students).

### **TOOLS:**

In this study the researcher prepared a questionnaire containing 30 items to identify the beliefs and attitudes of the teachers towards traditional methods of teaching, constructivist's method and ICON model of teaching mathematics. The questionnaire contains both open ended and close ended questions. The beliefs held by the teachers about teaching methods are very complex and of varieties of categories. So, open ended questions are included in the questionnaire to investigate all types of beliefs and attitudes that a teacher may hold. These open ended questions mainly try to investigate the beliefs about how mathematics teaching and learning actually occur,

how teaching learning should ideally occur, what are strengths and weaknesses of the traditional method of teaching, what are strengths and weaknesses of the constructivist's method of teaching and what are the strengths and weaknesses of the ICON model of teaching. The closed ended questions are mainly used to identify their beliefs and attitudes on teacher-centric learning and student-centric learning, direct transmission method and constructivists learning method or ICON model of teaching etc.

## RESULT AND DISCUSSION:

The teachers were asked the question that what are the strengths and weaknesses of the traditional method of teaching. The answers of the teachers are analyzed and it is seen that 88.3% of the teachers presented different types of strengths of this method and only 11.7% admits that the method no longer has any strength and it is not suitable for the present day world. Similarly the teachers are asked to write the strengths and weaknesses of the constructivists method of teaching and their answers show that only 13.8% of them find the strengths in this method and 86.2 % of them can see the weaknesses of this method like the method is not applicable in teaching learning of mathematics or the method has no credit to be the modern method suitable for the 21<sup>st</sup> century school etc. In the same way for the ICON model of teaching 15.1% supports that it has strengths and 84.9% believes that the method has weaknesses rather than strengths. When the result is investigated gender-wise it is seen that 86.6% male and 90.6% of the female believes that the traditional method of teaching has strength. That is, the female teachers have more positive belief than the male teachers on traditional method of teaching. In case of constructivists method 14.2% of the male teachers and 13.3% of the female teachers admit that this method has strength. That is, more male teachers than the female teachers admit the existence of the strength of the constructivist's method of teaching. In case of ICON model of teaching the 16.4% of the male teachers and 13.4% of the female teachers admit that this method has strength. That is, more male teachers than the female teachers admit the existence of the strength of the ICON model of teaching. The view of the trained and untrained teachers are taken about the strengths of the traditional method, constructivist's method and ICON model of teaching and the result shows that 87.2% of the trained teachers and 91.2% of the untrained teachers admit the existence of the strengths of the traditional method, 14.3% of the trained teachers and 12.5 % of the untrained teachers admit the existence of the strength of the constructivists method and 16.2% of the trained teachers and 12.3% of the untrained teachers admit the existence of the ICON model of teaching. Which show that the trained and untrained teachers have more or less the same types of beliefs about the different types of teaching methods. The view of the reputed school teachers (reputed in the sense of board examination result of the students) was studied and it shows that 86.8% of the reputed school teachers against 88.9% of the non-reputed school teachers admit the strength of the traditional method of teaching, 13.5% of the reputed school teachers against 13.9% of the non-

reputed school teachers admit the strength of the constructivist's method of teaching and 15.9% of the reputed school teachers against 14.8% of the non-reputed school teachers admit the strength of the traditional method of teaching. Thus it is seen that the beliefs of the reputed school teachers and non-reputed school teachers on different teaching learning methods are more or less the same.

## CONCLUSION:

The result of the discussion shows that the teachers of the different schools have many more positive beliefs on the traditional method of teaching than the constructivist's method and ICON model of teaching. Also it is seen that the male and female teacher have more or less the same types of beliefs about the different methods of teaching. Trained and untrained teachers also have more or less the same types of beliefs about the different methods of teaching. So it is obvious that training of the teachers cannot change their beliefs about the methods of teaching. It is more alarming to the training colleges and it is the matter of doubt about the duties and functioning of the training colleges. The training college should take more responsibilities to introduce the positive beliefs about the modern teaching methods to the teacher-trainee.

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